

FIG. 1

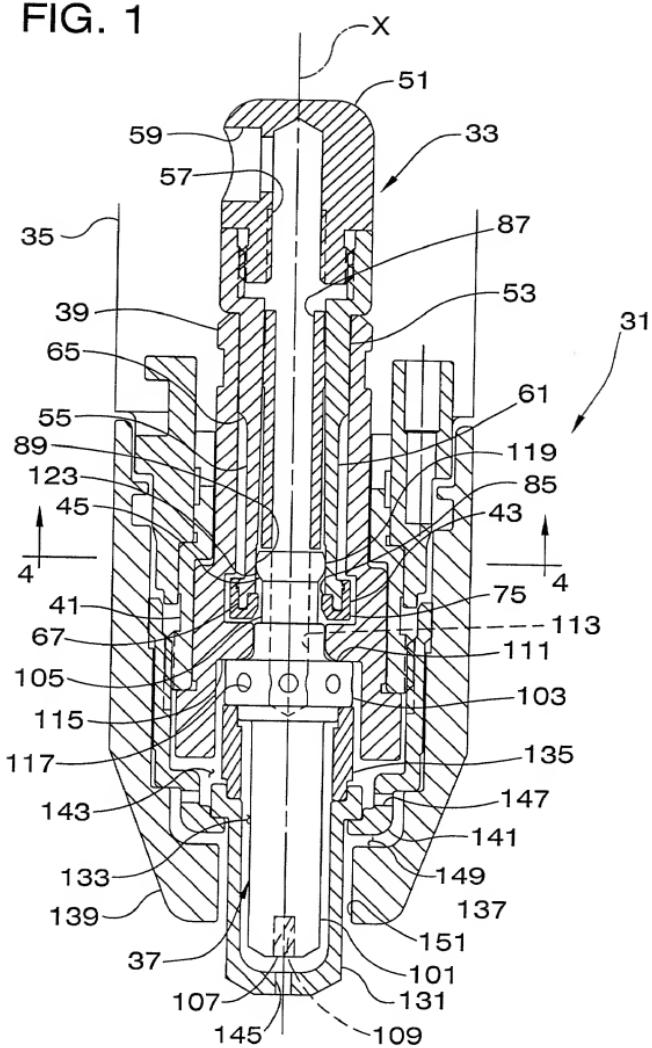


FIG. 2

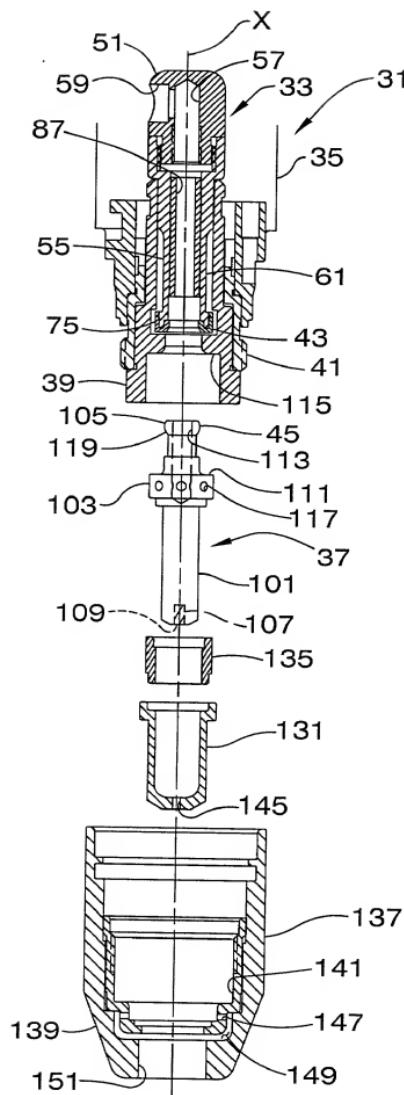


FIG. 3

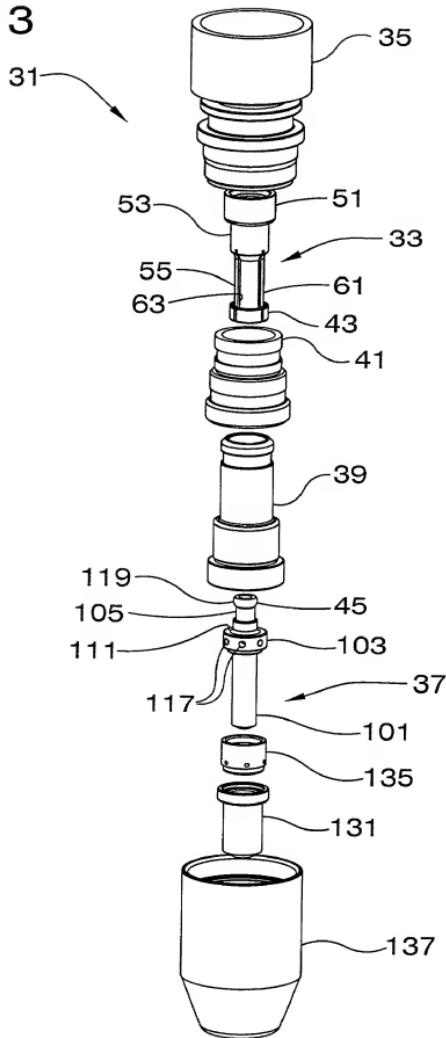


FIG. 4

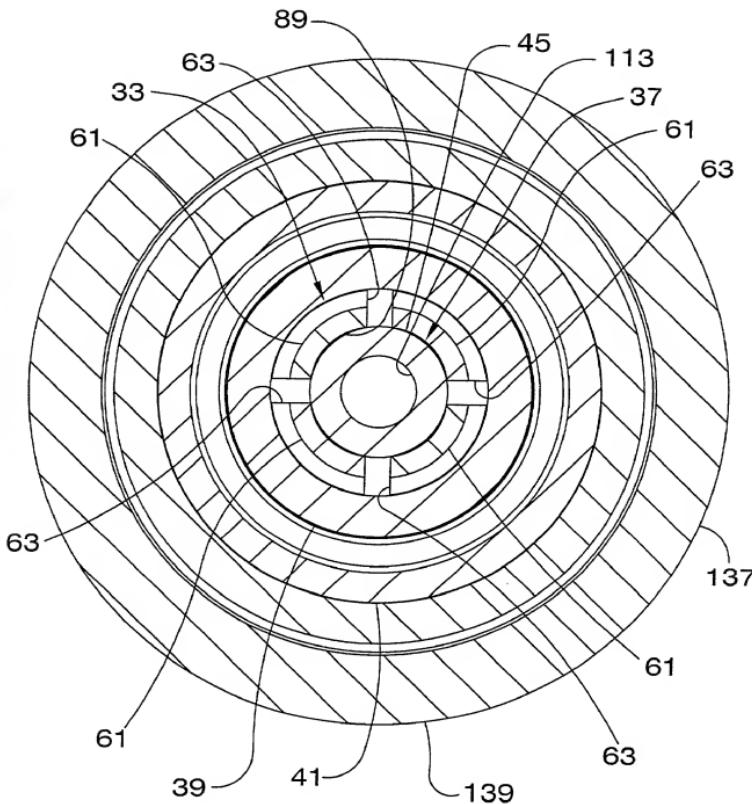


FIG. 5

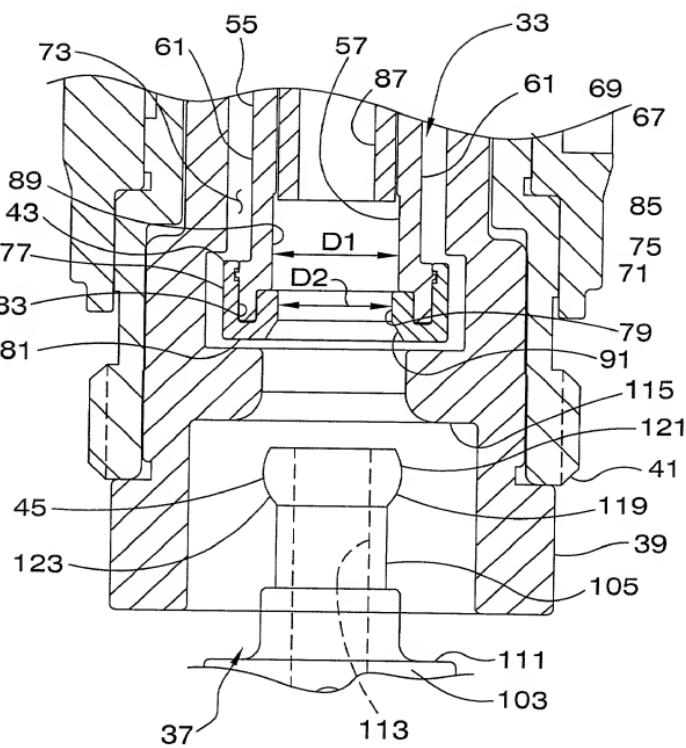


FIG. 6

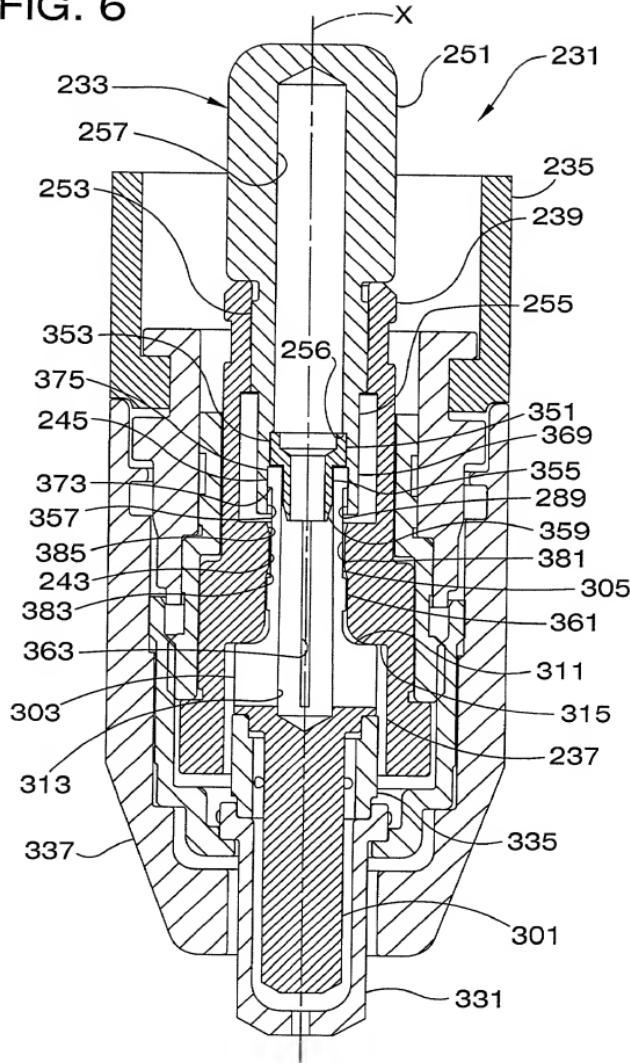
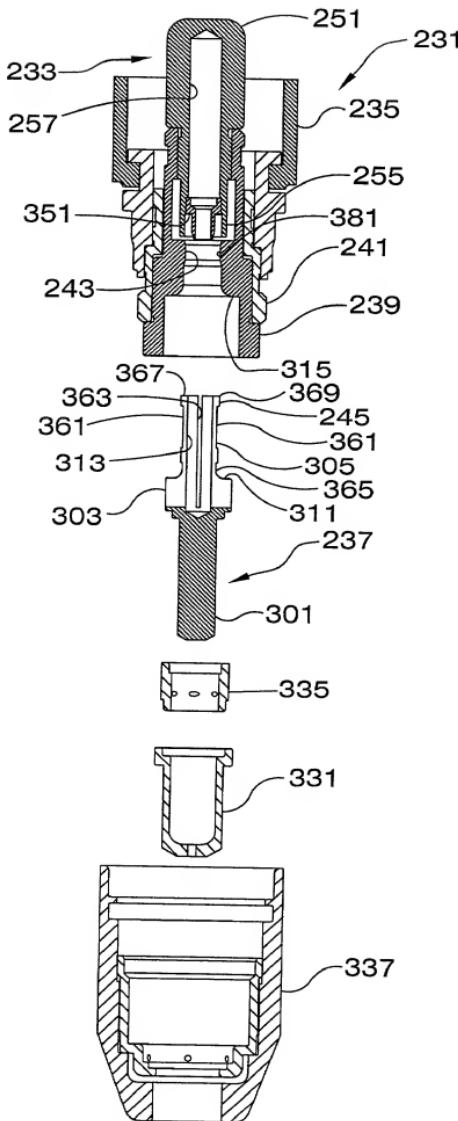


FIG. 7



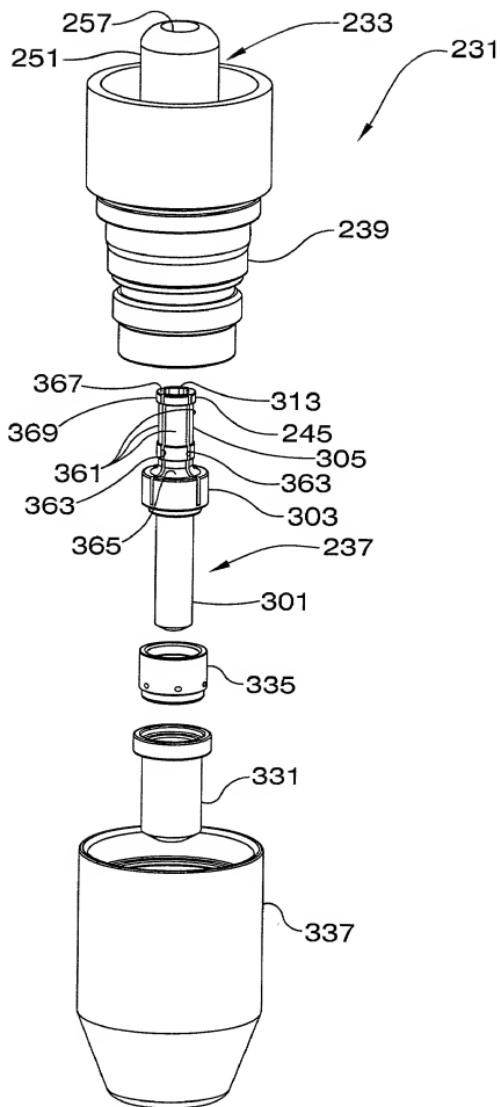
**FIG. 8**

FIG. 9

U.S. Pat. Off. Pat. No. 3,633,611  
Filed Sept. 1, 1967

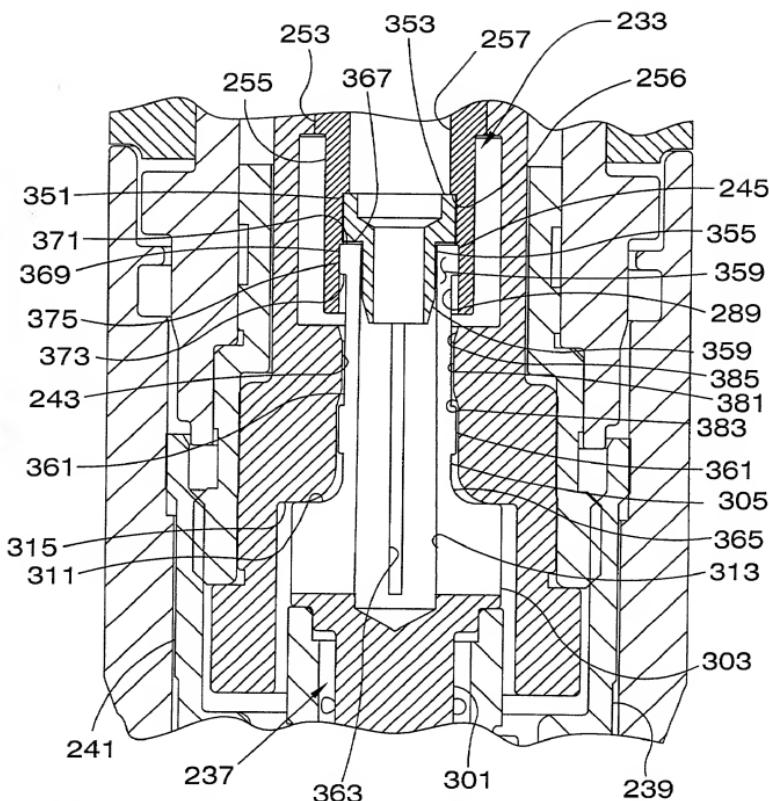


FIG. 10A

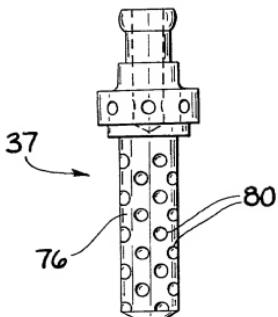


FIG. 10B

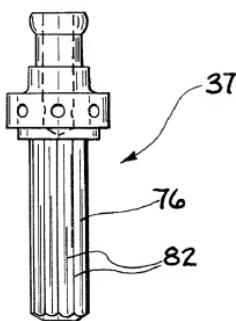


FIG. 10C

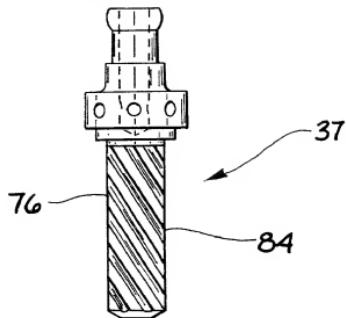


FIG. 11

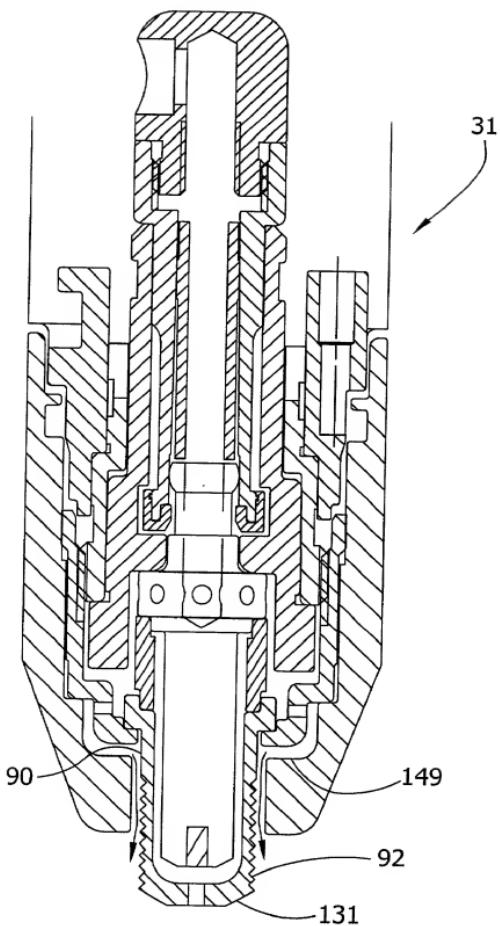


FIG. 11A

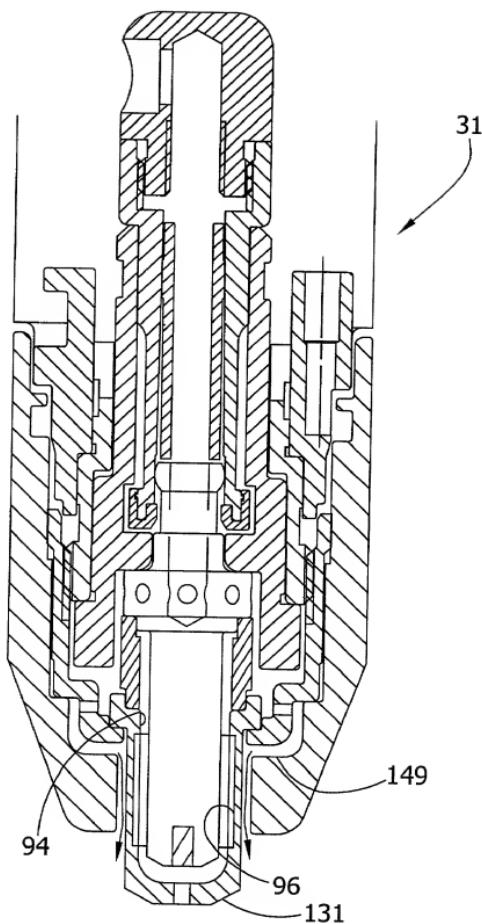
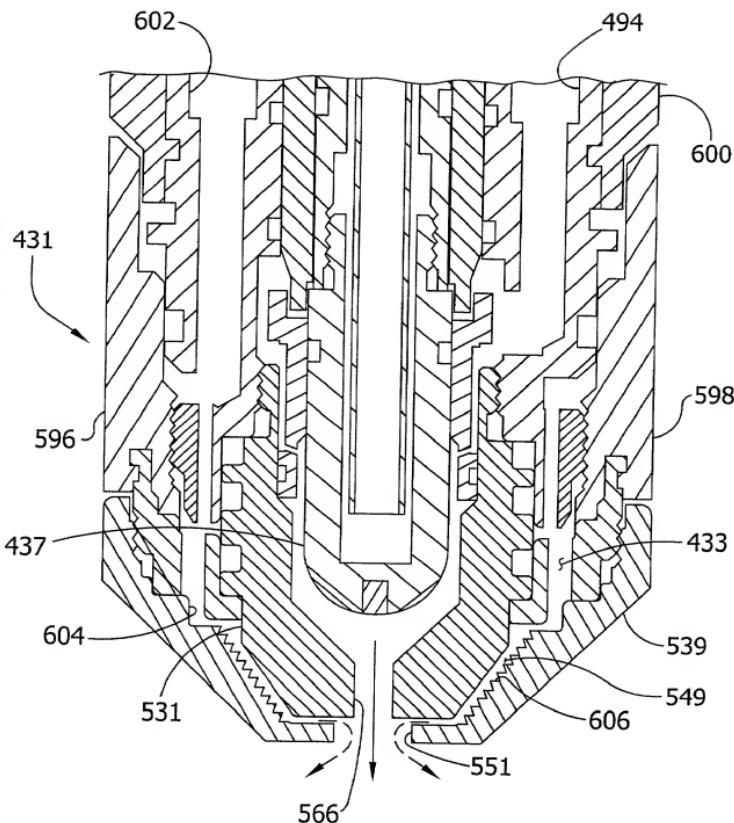


FIG. 12



→ PLASMA FLOW  
→ SECONDARY FLOW

FIG. 13

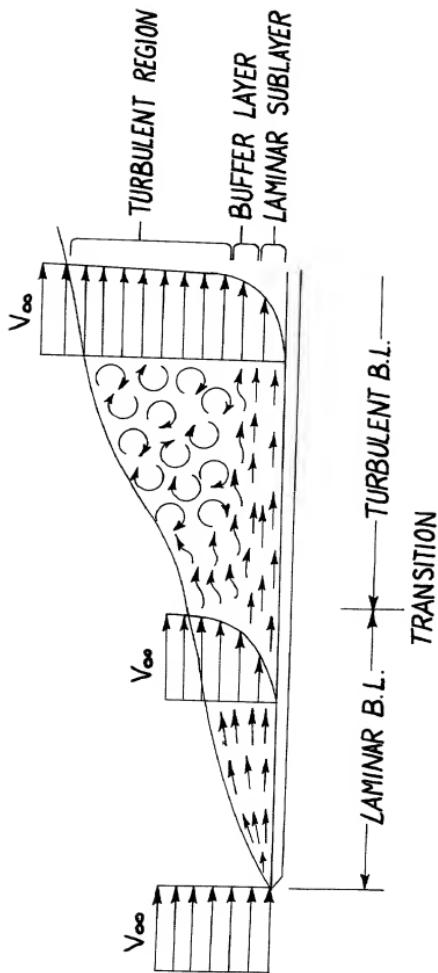


FIG. 14

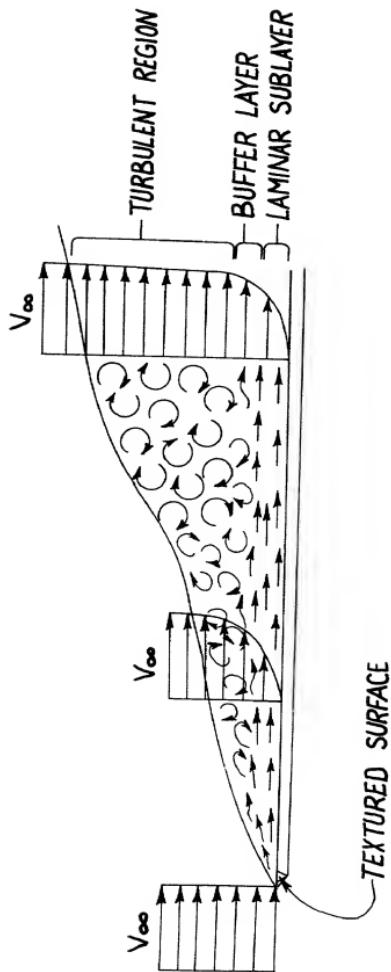


FIG. 15

<b>FIG. 15</b>	<b>Tip Orifice Diameter (in.)</b>	<b>Current (amps)</b>	<b>Std. Volumetric Flow Rate (Std. ft<sup>3</sup>/hr)</b>	<b>Electrode Outer Diameter (in.)</b>	<b>Tip Inner Diameter (in.)</b>	<b>Gas Passage Cross-Sectional Area (in.<sup>2</sup>)</b>	<b>Std. Flow Velocity (ft/sec.)</b>	<b>Life (Cycles)</b>
<b>Textured Electrode with Axial Grooves</b>	0.055	80	90	0.235	0.280	0.018202	198	466
	0.055	80	90	0.245	0.290	0.018908	190	646
	0.055	80	90	0.235	0.285	0.02042	176	429
	0.055	80	90	0.235	0.290	0.022678	159	607
	0.055	80	90	0.235	0.293	0.024052	150	492
	0.055	80	90	0.245	0.303	0.024963	144	463
	0.055	80	90	0.235	0.296	0.02544	142	458
	0.055	80	90	0.235	0.299	0.026842	134	165
	0.055	80	90	0.235	0.303	0.028733	125	153
	0.031	40	50	0.245	0.268	0.009267	216	865
<b>Textured Electrode w/ Circumferential Grooves</b>	0.031	40	50	0.235	0.260	0.009719	206	712
	0.031	40	50	0.235	0.263	0.010952	183	734
	0.031	40	50	0.235	0.266	0.012198	164	731
	0.031	40	50	0.235	0.268	0.013037	153	857
	0.055	80	90	0.233	0.280	0.018908	106	724
<b>Non-Textured Electrode</b>	0.055	80	90	0.233	0.280	0.018937	190	144
	0.055	80	90	0.233	0.290	0.023414	154	180
	0.055	80	90	0.233	0.285	0.021155	170	161
	0.055	80	90	0.233	0.296	0.026175	138	191